

WHAT IS CLAIMED IS:

1. A handle set, comprising:
 - a liner body having an insert opening;
 - a handle assembly having an insert member that is inserted into said insert opening, said insert member having an outer surface, a bore, and a perimetrical groove formed in said outer surface extending around a perimeter of said outer surface, said perimetrical groove extending to said bore at least at one location;
 - a retaining ring received in said perimetrical groove; and
 - a spindle assembly including a spindle shaft configured for insertion into said bore of said insert member, said spindle assembly including a stop member extending outwardly from said spindle shaft, said stop member including a ramped surface and a stop surface, said spindle shaft being mounted to said insert member by sliding said spindle shaft in a first direction into said bore, said stop member being configured such that said stop surface engages said retaining ring to resist removal of said spindle shaft from said bore when said spindle shaft is moved in a second direction opposite to said first direction.
2. The handle set of claim 1, said retaining ring having a pre-expansion state wherein when said spindle shaft is inserted in said first direction into said bore, said ramped surface of said stop member engages said retaining ring to apply an interior force to said retaining ring to expand said retaining ring, said retaining ring returning to said pre-expansion state after said ramped surface passes said retaining ring.
3. The handle set of claim 1, wherein said bore of said insert member having a passage for receiving said stop member.
4. The handle set of claim 3, said perimetrical groove extends into said bore at said passage.
5. The handle set of claim 1, said spindle assembly further including a limit member spaced from said stop member, said retaining ring being maintained between said stop member and said limit member.

6. The handle set of claim 1, further comprising a lock mechanism configured for connection to said spindle shaft, said lock mechanism including a housing, said housing including a shaft opening having a clearance notch formed therein to facilitate passing said stop member of said spindle shaft through said lock mechanism
5 as said spindle shaft is received in said shaft opening.

7. The handle set of claim 6, said spindle assembly further including a limit member spaced from said stop member, said retaining ring and a portion of said housing of said lock mechanism being maintained between said stop member and said
10 limit member.

8. The handle set of claim 1, said retaining ring having a split, said retaining ring having a pre-expansion state when not acted on by an interior force, said retaining ring expanding at said split when acted on by said interior force, said interior force being applied by said ramped surface of said stop member.

9. A spindle assembly for a handle set, comprising:
a spindle shaft;
a lock mechanism configured for connection to said spindle shaft; and
a stop member extending outwardly from said spindle shaft, said stop member
5 including a ramped surface and a stop surface.

10. The spindle assembly of claim 9, wherein said ramped surface angularly extends outwardly from an outer surface of said spindle shaft and terminates at said stop surface.

11. The spindle assembly of claim 10, wherein said stop surface extends outwardly from said spindle shaft in a direction substantially orthogonal to said outer surface of said spindle shaft.

12. The spindle assembly of claim 9, further comprising a limit member extending outwardly from said spindle shaft, said limit member being spaced from said stop member.

13. The spindle assembly of claim 9, said lock mechanism including a housing, said housing including a shaft opening with a clearance notch formed to facilitate passing said stop member of said spindle shaft through said lock mechanism as said spindle shaft is received in said shaft opening.

14. The spindle assembly of claim 13, further comprising a limit member spaced from said stop member, a portion of said housing of said lock mechanism being maintained between said stop member and said limit member.

15. The spindle assembly of claim 9, wherein said spindle shaft is a half-round spindle.

16. A handle set, comprising:

a liner body having an insert opening;

a handle assembly having an insert member that is inserted into said insert opening, said insert member having an outer surface, a bore, and a perimetrical groove formed in said outer surface extending around a perimeter of said outer surface, said perimetrical groove extending to said bore at least at one location;

a retaining ring received in said perimetrical groove; and

a spindle assembly including a spindle shaft configured for insertion into said bore of said insert member, said spindle shaft being mounted to said insert member by sliding said spindle shaft in a first direction into said bore; and

means for engaging said retaining ring to resist removal of said spindle shaft from said bore when said spindle shaft is moved in a second direction opposite to said first direction.

17. A method of assembling a handle set, comprising the steps of:

providing a liner body having an insert opening;

providing a handle assembly having an insert member, said insert member having an outer surface, a bore, and a perimetrical groove formed in said outer surface
5 extending around a perimeter of said outer surface, said perimetrical groove extending to said bore at least at one location;

inserting said insert member into said insert opening;

mounting a retaining ring in said perimetrical groove;

providing a spindle assembly including a spindle shaft, said spindle assembly
10 including a stop member extending outwardly from said spindle shaft, said stop member including a ramped surface and a stop surface; and

sliding said spindle shaft in a first direction into said bore, said ramped surface of said stop member engaging said retaining ring to apply an interior force to said retaining ring to expand said retaining ring, said retaining ring returning to a pre-
15 expansion state after said ramped surface passes said retaining ring, said stop surface engaging said retaining ring to resist removal of said spindle shaft from said bore when said spindle shaft is moved in a second direction opposite to said first direction.

18. The method of claim 17, said bore of said insert member having a passage to which said perimetrical groove extends, said method further comprising the step of receiving said stop member in said passage.

19. The method of claim 18, wherein said passage is a keyway.